AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Canceled)**

2. **(Previously Presented)** The VCSEL of claim 34 wherein said barrier layers are comprised of GaAsN.

3. **(Canceled)**

4. **(Canceled)**

5. **(Previously Presented)** The VCSEL of claim 34 wherein said at least one quantum well further comprises >1% N.

6. **(Previously Presented)** The VCSEL of claim 34 wherein said at least one quantum well is up to and including 50Å in thickness.

7. **(Previously Presented)** The VCSEL of claim 5 wherein said at least one quantum well is up to and including 50Å in thickness.

8. **(Canceled)**

9. **(Currently Amended)** The VCSEL of claim [[5]] 16 wherein said at least one quantum well further comprises >1% N ~~confinement layers are comprised of AlGaAs~~.

10. - 13. **(Canceled)**

14. **(Previously Presented)** The VCSEL of claim 28 wherein said at least one quantum well is further comprised of Sb.

15. **(Previously Presented)** The VCSEL of claim 34 wherein said barrier layers are comprised of InGaAs.

16. **(Currently Amended)** ~~The VCSEL of claim 15~~ A vertical cavity surface emitting laser (VCSEL), comprising:

an active region further comprising at least one quantum well and including barrier layers sandwiching said at least one quantum well, at least one of the quantum well and the barrier layers including nitrogen, wherein said at least one quantum well is further comprised of Sb;

upper and lower confinement layers sandwiching said active region, wherein the barrier layers and/or the upper and lower confinement layers are comprised of material that reduces a level of non-confining valence band discontinuity in the quantum well due to the presence of nitrogen in the quantum well, wherein said barrier layers are comprised of InGaAs and wherein said confinement layers are comprised of GaAsN; and

a flattening layer interposed between the lower confinement layer and the at least one quantum well.

17. **(Canceled)**

18. **(Currently Amended)** The VCSEL of claim [[15]] 16 wherein said at least one quantum well is up to and including 50Å in thickness ~~confinement layers are comprised of AlGaAs~~.

19. - 20. **(Canceled)**

21. **(Canceled)**

22. **(Currently Amended)** The VCSEL of claim [[21]] 29 wherein said at least one quantum well is up to and including 50Å in thickness ~~confinement layers are comprised of AlGaAs~~.

23. **(Currently Amended)** The VCSEL of claim [[21]] 28 wherein said at least one quantum well is up to and including 50Å in thickness.

24. **(Previously Presented)** A vertical cavity surface emitting laser (VCSEL) comprising:

an active region further comprising at least one quantum well comprised of InGaAsN and including InGaAsN barrier layers sandwiching said at least one quantum well; and

AlGaAs confinement layers sandwiching said active regions.

25. **(Previously Presented)** The VCSEL of claim 28 wherein said AlGaAs barrier layers are further comprised of N.

26. **(Previously Presented)** The VCSEL of claim 24 wherein said at least one quantum well is further comprised of Sb.

27. **(Previously Presented)** The VCSEL of claim 24 wherein said at least one quantum well is up to and including 50Å in thickness.

28. **(Previously Presented)** A vertical cavity surface emitting laser (VCSEL), comprising:

an active region further comprising at least one quantum well comprised of InGaAsN and including AlGaAs barrier layers sandwiching said at least one quantum well; and

AlGaAs confinement layers sandwiching said active region.

29. **(Previously Presented)** A vertical cavity surface emitting laser (VCSEL), comprising:

an active region further comprising at least one quantum well comprised of InGaAsN and including InGaAs barrier layers sandwiching said at least one quantum well; and

AlGaAs confinement layers sandwiching said active region.

30. **(Previously Presented)** A vertical cavity surface emitting laser (VCSEL), comprising:

an active region further comprising at least one quantum well comprised of InGaAsN and including GaAsN barrier layers sandwiching said at least one quantum well; and

GaAsN confinement layers sandwiching said active region.

31. **(Canceled)**

32. **(Canceled)**

33. **(Previously Presented)** A vertical cavity surface emitting laser (VCSEL), comprising:

an active region further comprising at least one quantum well comprised of InGaAsN and including AlGaAs barrier layers sandwiching said at least one quantum well; and

GaAsN confinement layers sandwiching said active region.

34. **(Currently Amended)** A vertical cavity surface emitting laser (VCSEL), comprising:

an active region further comprising at least one quantum well and including barrier layers sandwiching said at least one quantum well, at least one of the quantum

well and the barrier layers including nitrogen, wherein said at least one quantum well is further comprised of Sb;

upper and lower confinement layers sandwiching said active region, wherein the barrier layers and/or the upper and lower confinement layers are comprised of material that reduces a level of non-confining valence band discontinuity in the quantum well due to the presence of nitrogen in the quantum well, wherein said confinement layers are comprised of AlGaAs; and

a flattening layer interposed between the lower confinement layer and the at least one quantum well.

35. **(New)** The VCSEL of claim 29 wherein said at least one quantum well is further comprised of Sb.

36. **(New)** The VCSEL of claim 30 wherein said at least one quantum well is further comprised of Sb.

37. **(New)** The VCSEL of claim 33 wherein said at least one quantum well is further comprised of Sb.

38. **(New)** The VCSEL of claim 30 wherein said at least one quantum well is up to and including 50Å in thickness.

39. **(New)** The VCSEL of claim 33 wherein said at least one quantum well is up to and including 50Å in thickness.

40. **(New)** The VCSEL of claim 33 wherein said AlGaAs barrier layers are further comprised of N.